



## **3001L Security System** installation guide

**Note:** This product is intended for installation by a professional installer only! Any attempt to install this product by any person other than a trained professional may result in severe damage to a vehicle's electrical system and components.

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**Directed**<sup>®</sup>  
E L E C T R O N I C S

Bitwriter®, Code Hopping™, Doubleguard®, ESP™, FailSafe®, Ghost Switch™, Learn Routine™, Nite-Lite®, Nuisance Prevention® Circuitry, Revenger®, Silent Mode™, Soft Chirp®, Stinger®, Vehicle Recovery System®, VRS®, and Warn Away® are all Trademarks or Registered Trademarks of Directed Electronics.



The Bitwriter® (p/n 998U) requires chip version 2.5 or newer to program this unit.

Bitwriters with date code of 6A or older require an IC upgrade (p/n 998M). Some Bitwriters with a date code of 6B do not require the IC upgrade. Refer to Tech Tip # 1112 for more information. Bitwriter 2 compatible.

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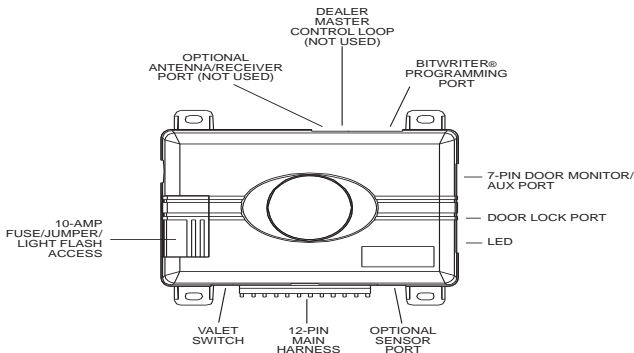
# What is new

- The shock sensor is pre-set, but can be fine-tuned with the Bitwriter (see page 34)

# What is included

- Control module
- 12-pin main harness
- 7-pin door monitor/  
Aux harness
- 4-pin sensor harness
- Valet switch and LED
- 3-pin door lock harness

# Control module



# Installation points to remember

This product represents many years of research and development. It is very sophisticated and should be installed by experienced security installers only. Please do not attempt installation of this product without reading this guide. The system has been designed to provide the ultimate in security, coupled with limitless convenience and expansion options.

Do not disconnect the battery if the vehicle has an anti-theft coded radio. If equipped with an airbag, avoid disconnecting the battery if possible.

**IMPORTANT!** Please read this entire installation guide before beginning the installation. The installation of this security system requires interfacing with many of the vehicle's systems. Many new vehicles use low-voltage or multiplexed systems which can be damaged by low resistance testing devices, such as test lights or logic probes. Test all circuits with a high-quality digital multi-meter before making the connections.

**IMPORTANT!** Many airbag systems will display a diagnostic code through their warning light after they lose power. Disconnecting the battery requires this code to be erased, a procedure that can require a trip to the dealer.s

## Before you begin the installation

- Check with the customer to determine the LED and Valet switch location.
- Remove the domelight fuse. This prevents accidentally draining the battery.
- Roll down a window to avoid being locked out of the car.

## After the install

- Test all functions. The “Using Your System” section of the Owner’s Guide is very helpful when testing.
- When testing, don’t forget that this system is equipped with Nuisance Prevention Circuitry. NPC™ can bypass both sensor zones, making them seem to stop working.
- Carefully reassemble the under-dash trim panels.
- Inspect the engine compartment for tools that may have been left behind.

## Tools required

This is a general list of tools required to complete the installation of this security system in most vehicles. Some vehicles may require additional tools.

- Digital multi-meter
- Wire cutters/strippers
- Solderless terminal crimpers
- Cordless power drill driver
- Torx driver set
- Nutdriver and/or socket set
- Panel removal tool
- Drill bit set
- Phillips head screwdriver
- Work light

# Deciding on component location

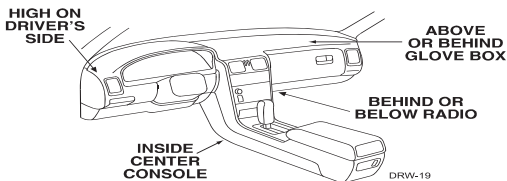
## Control module

Never put the control module in the engine compartment!

The first step in hot-wiring a vehicle is removing the driver's side underdash panel to access the starter and ignition wires. If the control module is placed just behind the driver's side dash it can easily be disconnected.

When locating the control module, try to find a secure location that will not require you to extend the harnesses' wires (they are 1.5 meters long). Keep it away from the heater core (or any other heat sources) and any obvious leaks.

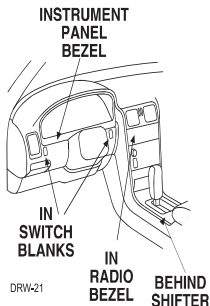
Some good control module locations: Above the glove box, inside the center console, above the underdash fuse box, behind or below above the radio, etc.



## LED and Valet switch

Things to remember when positioning the LED and Valet switch:

- The LED should be visible from both sides and the rear of the vehicle, if possible.
- The LED and Valet switch should be at least 1-1/2" clearance to the rear.
- It is easiest to use a small removable panel, such as a switch blank or a dash bezel. Remove it before drilling your 5/16" hole.



**Important!** Do **Not** use a step drill bit (unibit) for drilling the 5/16" hole. It is recommended to use a 5/16" drill bit. Use care to ensure the hole is drilled straight. Drilling at an angle can cause product malfunction.

## Starter kill relay

If the Starter Kill Relay or it's connections are immediately visible upon removal of the underdash panel, they can easily be bypassed.

Always make the relay and its connections difficult to notice from the factory wiring. Exposed yellow butt connectors do not look like factory parts, and will not fool anyone. For this reason, routing the starter kill wires away from the steering column is recommended.

# Connecting your wires

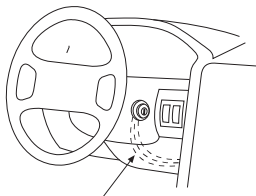
Now that you have decided where each component will be located, you're going to find the wires in the car that the security system will be connected to.

**Important!** Do not use a 12V test light or logic probe to find these wires! All testing described in this manual is described using a digital multimeter.

## Obtaining constant 12V

We recommend two possible sources for 12V constant: The (+) terminal of the battery, or the constant supply to the ignition switch. **Always install a fuse within 12 inches of this connection.**

**Important!** Do not remove the fuse holder on the red (H1/11) wire. It ensures that the control module has it's own fuse, of the proper value, regardless of how many accessories are added to the main power feed.



**CONSTANT 12V** DRW-23

## Finding the 12V switch ignition wire

The ignition wire is powered when the key is in the run or start position. This is because the ignition wire powers the ignition system (spark plugs, coil) as well as the fuel delivery system (fuel pump, fuel injection computer). Accessory wires, on the other hand, lose power when the key is in the start position to make more current available to the starter motor. Use the following procedure to find (+)12V with your multimeter.

1. Set to DCV or DC voltage (12V or 20V is fine).
2. Attach the (-) probe of the meter to chassis ground.
3. Probe the wire you suspect of being the ignition wire. The steering column harness or ignition switch harness is an excellent place to find this wire.
4. Turn the ignition key switch to the run position. If your meter reads (+)12V, go to the next step. If it doesn't, probe another wire.
5. Now turn the key to the start position. The meter display should stay steady, not dropping by more than a few tenths of a volt. If it drops close to or all the way to zero, go back to step 3. If it stays steady at (+)12V, you have found an ignition wire.

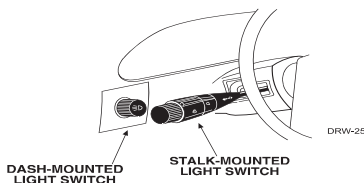
## Finding a parking light wire

The parking light wire is often found near the switch. Many cars have the switch built into the turn signal lever, and the parking light wire can be found in the steering column. The same wire is often available in the kick panel or running board.

To find the (+) and (-) parking light wire with your multimeter.

1. Set to DCV or DC voltage (12V or 20V is fine).
2. To find a (+) circuit, attach (-) probe of the meter to ground. If you are looking for a (-) circuit, attach (+) probe of the meter to (+) 12V.
3. Probe the wire you suspect of being the parking light wire. The area near the headlight/parking light switch, or near the kick panel, is an excellent area to start.
4. Turn on the parking lights. If your meter shows (+)12V, turn off the parking lights and make sure it goes back to zero.
5. With the meter at zero, turn the parking lights On, and using the dash light dimmer control, turn the brightness of the dash lights up and down.

If the meter changes more than a volt when using the dimmer, look for another wire. If it stays relatively close to (+)12V, you have found your parking light wire.



## Finding the door pin switch circuit

The best places to find the door switch wire are:

**At the pin switch:** When testing at the pin switch, check the wire to ensure that it “sees” all the doors. Often, the passenger switch will cover all the doors even if the driver’s switch will not.

**At the dome light:** This may not be your best choice if the vehicle has delayed domelight supervision, but it will work in vehicles with completely diode-isolated pin switches.

Often the door switch wires, described above, can also be found in the windshield pillars, running boards or kick plates.

Use the following procedure to find the door pin switch wire with your multimeter.

1. Set to DCV or DC voltage (12V or 20V is fine).
2. In most cars, fasten the (+) probe of your meter to (+)12V constant.
3. Using meter, probe the wire you suspect of being the door trigger wire. If the meter reads (+)12V when any door is opened and the meter goes to 0 with the door closed, you have found a (-) trigger wire.
4. Fasten the (-) probe of your meter to ground and then using positive probe check for positive Door Trigger. If your meter displays 12V when the Door is opened and 0 when it is closed you have found the (+) door trigger.

**Important:** Make sure the wire you use “sees” all the doors - some newer vehicles lack standard-type pinswitches. The dome light in these vehicles is turned on when the door handle is lifted. There is usually a wire coming out of the door into the kick panel to provide a (-) trigger for all doors.

# Main harness wire connection guide

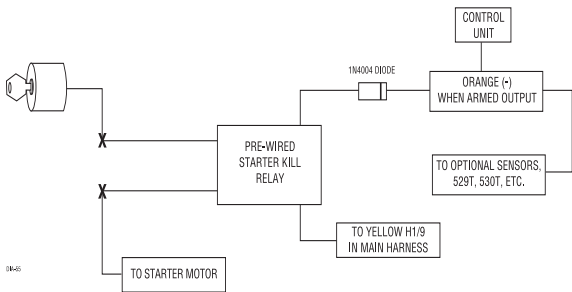
## Main harness wiring diagram

<b>H1/1</b>	ORANGE	(-)500mA Ground When Armed
<b>H1/2</b>	WHITE	(+)Default/(-) Light Flash Output
<b>H1/3</b>	WHITE/BLUE	No Function
<b>H1/4</b>	BLACK/WHITE	(-) 200mA Domelight Supervision Output
<b>H1/5</b>	GREEN	(-) Door Trigger Input
<b>H1/6</b>	BLUE	(-) Instant Trigger (Hood and Trunk Pin)
<b>H1/7</b>	VIOLET	(+) Door Trigger Input
<b>H1/8</b>	BLACK	(-) Chassis Ground Input
<b>H1/9</b>	YELLOW	(+)Ignition Input
<b>H1/10</b>	BROWN	(+)Siren Output
<b>H1/11</b>	RED	(+) 12V Constant Power Input
<b>H1/12</b>	RED/WHITE	(-)200mA Auxiliary Channel/Delayed Accessory Output

## Main harness wiring guide

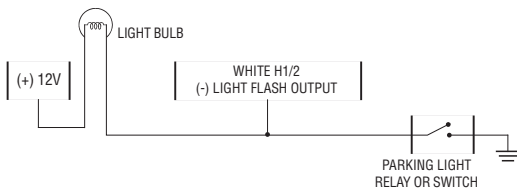
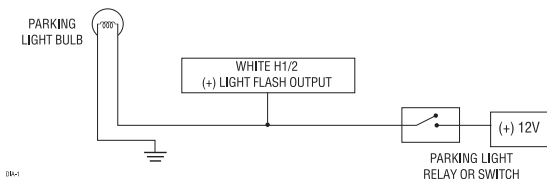
**H1/1 ORANGE (-) 500 mA ground-when-armed output:** This wire supplies a (-) ground as long as the system is armed. This output ceases as soon as the system is disarmed. This wire controls operation of the pre-wired starter kill relay and can be used to control other optional accessories.

**Note:** If connecting the orange wire to control another module, such as a 529T or 530T window controller, a 1 amp diode (type 1N4004) will be required. Insert the diode as shown below.



**Important!** Never interrupt any wire other than the starter wire.

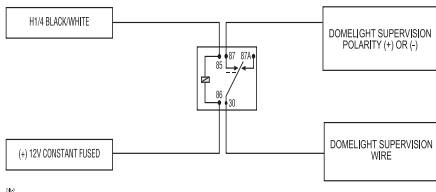
**H1/2 WHITE light flash output:** As shipped, this wire should be connected to the (+) parking light wire. It will supply a (+) 10A output. If the light flash polarity fuse jumper inside the unit is moved to the opposite position (see Internal Jumpers), this wire supplies a (-) 10A output. This is suitable for driving (-) parking light wires.



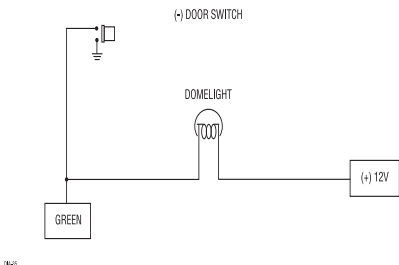
**H1/3 WHITE/BLUE no function.**

**H1/4 BLACK/WHITE (-) 200 mA domelight-supervision output:** Connect this wire to the (optional) domelight supervision relay. The standard system does not include this relay, it is an optional feature.

**Important!** This output is only intended to drive a relay. It cannot be connected directly to the domelight circuit, as the output cannot support the current draw of one or more bulbs.

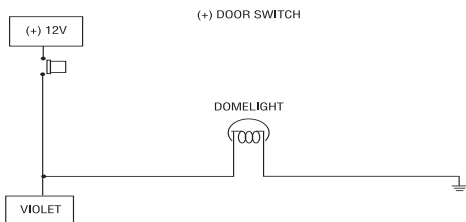


**H1/5 GREEN (-) door trigger input:** Most vehicles use negative door trigger circuits. Connect the green wire to a wire which shows ground when any door is opened. In vehicles with factory delays on the dome light circuit, there is usually a wire that is unaffected by the delay circuitry.



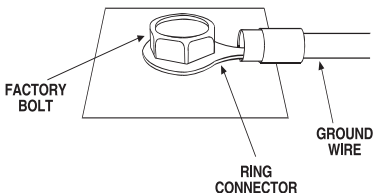
**H1/6 BLUE (-) instant trigger:** This input will respond to a negative input with an instant trigger. It is ideal for hood and trunk pins and will report on zone one.

**H1/7 VIOLET (+) door trigger input:** This wire is used in vehicles that have a positive (+) switched dome light circuit . Connect the violet wire to a wire that shows (+)12V when any door is opened and ground, when the door is closed

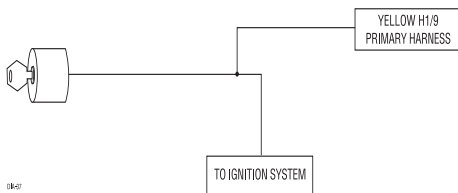


H1-10

**H1/8 BLACK (-) chassis ground connection:** We recommend that you do not use a factory ground. Ground all your components including the siren, to the same point in the vehicle, (preferably the kick panel). Scrape away any paint and use a factory bolt or make your own ground with a self-tapping screw and a star washer.



**H1/9 YELLOW (+) ignition input:** Connect this wire to the (+)12V ignition wire. This wire must show (+)12V with the key in Run position and during cranking. Take care to insure that this wire cannot be shorted to the vehicle chassis at any point.



**H1/10 BROWN (+) siren output:** Connect this to the RED wire of the siren. Connect the BLACK wire of the siren to (-) chassis ground, preferably at the same point as the control module's BLACK ground wire.

**H1/11 RED (+)12V constant power input:** Before connecting this wire, remove the supplied fuse. Connect to the battery positive terminal or the constant 12V supply to the ignition switch.

Always use a fuse within 12 inches of the point you obtain (+)12V. Do not use the 15A fuse in the harness for this purpose. This fuse protects the module itself.

**H1/12 RED/WHITE (-) 200mA auxiliary channel/delayed accessory output:** If programmed for an auxiliary output, this wire will provide a (-) pulse when the lock button on the factory transmitter is pressed twice within three seconds. This output can be used to control optional accessories. If programmed for delayed accessory output, this wire will pro-

vide (-) ground when the ignition is turned off and will continue to output (-) ground until a door is opened then closed. This can be used to energize the accessory circuit in the vehicle to keep the radio and other accessories on after the ignition is turned off.

**Important!** Never use this wire to drive anything but a relay or a low-current input! This transistorized output can only supply (-) 200 mA, and connecting directly to a solenoid, motor, or other high-current device will cause the module to fail.

Sensors and other triggers can be bypassed if this output is used to open the vehicle trunk while the alarm is armed. See H2/5 Gray zone shunting for programming and connection descriptions.

## Auxiliary harness wire connection guide

### Auxiliary harness wiring diagram

H2/1	BROWN	(-) Horn Honk Output
H2/2	GREEN	Arm Input
H2/3	RED	Disarm Defeat Input
H2/4	BLUE	Disarm Input
H2/5	GRAY	(+) Trunk Release/Sensor Shunt Input
H2/6	VIOLET/BLACK	No Function
H2/7	YELLOW/BLACK	Light Flash Monitor Input

## Auxiliary harness wiring guide

**H2/1 BROWN (-) horn honk output:** This wire supplies a 200 mA (-) output that can be used to honk the vehicle's horn. It provides a pulsed output when the security system is armed/disarmed and in the triggered sequence or in panic mode. In most vehicle's with (-) horn circuits this wire can control the vehicle's horn without adding a relay. If the vehicle has a (+) horn circuit, an optional relay must be used to interface with the vehicle's horn circuit.

**Important!** Never use this wire to drive anything but a relay or a low-current input! This transistorized output can only supply (-) 200 mA, and connecting directly to a solenoid, motor, or other high-current device will cause the module to fail.

**H2/2 GREEN for arm input:** Connect this GREEN wire to a wire that changes state when the doors are locked using the factory keyless entry transmitter. This wire can accept a positive (+) or negative (-) input. The vehicle's power door lock motor wire is ideal.

**H2/3 RED disarm defeat input:** This wire is used to prevent the interior door lock switches from disarming the system. To determine the best location to interface this wire, first test the operation of the remote keyless entry system.

When unlocking the doors with the factory remote transmitter, does the driver's door unlock first? Most vehicles operate this way. If this is the case connect the RED wire to the passenger unlock motor wire. When testing this wire, it should show 12V (+) ONLY when the unlock button on the factory transmitter is pressed a second time to unlock the passenger doors. If the factory keyless entry system unlocks all of the doors at the same time, it is recommended that the H2/7 YELLOW/BLACK wire

be used for disarm defeat input. The H2/3 wire connection is not required if using H2/7 YELLOW/BLACK as a disarm defeat wire.

**H2/4 BLUE disarm input:** Connect the BLUE wire to a wire that changes state when the doors are unlocked using the factory keyless entry transmitter. If the factory transmitter unlocks the driver's door first, the BLUE wire must be connected to the wire that changes state when the driver's door is unlocked by itself. In this case, find the driver's door unlock motor wire. In most vehicle's this wire can be found in the driver's kick panel.

**H2/5 GRAY trunk release/sensor shunt input:** This input is used to bypass the sensor inputs when the trunk is opened using the factory keyless entry system or trunk release relay while armed. When the system receives a (+) input on this wire, zones 1, 2 and 4 are bypassed for 3-seconds. If during that 3-seconds, ground is applied to the H1/6 BLUE wire then the alarm zones are bypassed (See Feature menu 1/8) and will remain bypassed until the ground input is removed. This means that when the trunk is open with the factory transmitter the only triggers that remain active while the trunk is open are the doors and ignition. 3-seconds after the trunk is closed the bypassed zones again become active.

**H2/6 VIOLET/BLACK no function.**

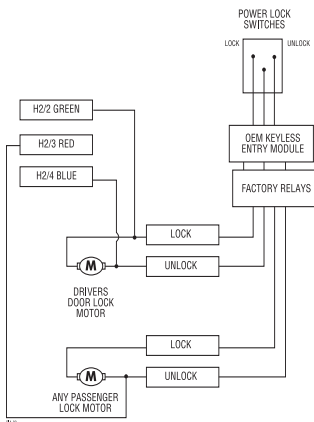
**H2/7 YELLOW/BLACK light flash monitor input:** This input monitors the factory system light flash output and can be used as a disarm defeat wire. Connect this wire to the light flash wire that flashes when the factory transmitter is used. This may be a status LED, parking lights, reverse lights, etc - depending on the vehicle type and manufacturer. The yellow/black wire can accept a (+) positive or (-) negative input and should be used when the factory keyless entry does not provide drivers priority unlock.

## Keyless entry systems—two types

There are two main types of keyless entry systems. Systems that unlock the driver's door first and Systems that unlock all doors at the same time.

drivers priority unlock

To test for this type of system unlock the door, by using the factory remote. If the factory remote only unlocks the drivers door on the first press of unlock use the following diagram.

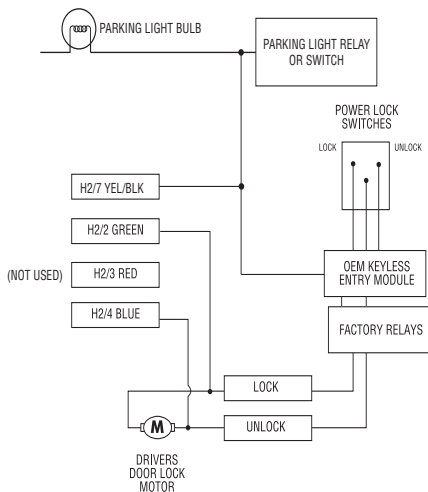


**Note:** It is often easy to access the passenger unlock wire going to the rear door motor on the driver's side.

## No priority—driver's door unlock

This type of keyless entry system is common in import vehicles as well as many Jeep vehicles. When unlocking the doors with the transmitter all doors unlock at the same time. It is recommended to use H2/7 YEL-LOW/BLACK wire for Disarm Defeat instead of the H2/3 RED wire. This input wire monitors the factory system light flash output. Connect this wire to the light flash wire that flashes when the factory transmitter is used. This may be a status LED, parking lights, reverse lights, etc., depending on the vehicle type and manufacturer. Do NOT connect this wire to the domelight. This wire can accept a (+) positive or (-) negative input.

For installation, please refer to the diagram below.



# Door lock harness wire connection guide

These door lock outputs are for Passive arming control of the factory door locks. They can also be used to control the door locks with the ignition switch for vehicles that do not have this feature in the factory RKE system.

<b>H3/A</b>	GREEN	(-) Lock, (+) Unlock Output
<b>H3/B</b>		Not Used
<b>H3/C</b>	BLUE	(-)Unlock, (+) Lock Output

The control module can control 2 common power door lock types without any additional parts. With certain vehicles, or if an actuator is to be installed, either a 451M Door Lock Relay Satellite or two relays will be required. See [www.directechs.com](http://www.directechs.com) for TechTips document 1041.

## Plug-in harnesses

### LED and Valet switch

The LED and Valet switch should be accessible from the driver's seat. The Valet switch plugs into the blue port on the side of the unit. Check for rear clearance before drilling a 5/16-inch hole and mounting the switch. The LED switch operates at 2V DC and plugs into the white port on the side of the unit. Make sure the LED wires are not shorted to ground, this will damage the LED.

## Data port—Bitwriter®

The black three-pin port can be used for programming the unit using the Directed Bitwriter, a hand held programming tool. The Bitwriter also allows programming of features that are not available in the feature menus.

## Four-pin optional sensor harness

### RED wire

The red wire supplies constant power to the optional sensor.

### BLACK wire

The black wire supplies ground to the optional sensor.

### BLUE, GREEN wires

The blue and green wires are multiplex inputs. They are both tied to the same zone. If an input of less than 0.8 seconds is supplied to either wire the Warn-Away® response will occur. An input longer than 0.8 seconds to either wire will initiate the triggered sequence and report zone 4. This port can be used for optional sensors such as: the 506T—glass break-age sensor, or the 508D—field disturbance sensor.

# Door lock learn routine

Before the unit will respond to the factory remote keyless system, it must learn the polarity of the door lock wires. To learn the lock polarity:

It is important that all the INPUT signals to the control module are in the rest status state (no activity) before entering the learn routine.

## To learn lock:

Make sure the doors, hood and trunk are closed so the factory system operates as it would when the user is using it.

1. With all the doors, hood and trunk closed: Plug in all harnesses (12 pin harness plugs in last )
2. Within 5-seconds: Press and hold the Valet switch.The LED flashes once.
3. Immediately press the lock button on the OEM transmitter. The LED will flash once confirming the lock was successfully learned then will light up solid.

## To learn unlock:

4. Within 3-seconds: Press and release the Valet switch once then press and hold. The LED will flash twice.
5. Immediately press the unlock button on the OEM transmitter.
6. The LED will flash twice then light up solid confirming the unlock was successfully learned.
7. Release the Valet switch.
8. Cycle the ignition switch to exit programming.

If the lock/unlock learn was unsuccessful, unplug the 12 pin harness for 15 seconds and re-attempt procedure.

The systems learn routine will only be active for ten seconds after power up. If locks are not successfully learned unplug main 12 pin harness for 15 seconds and re-attempt.

### **To exit the learn routine:**

You can do ONE of the following:

- Turn the ignition on.
- Wait for 15 seconds.
- Press the Valet switch too many times.

# On-board dual stage shock sensor

There is a dual-stage shock sensor inside the control module. Adjustments are made via programming routine indicated below. Since the shock sensor does not work well when mounted firmly to metal, we recommend against screwing down the control module. The full trigger of the onboard shock sensor reports zone 2. See Table of Zones.

When adjusting the sensor, it must be in the same mounting location after the install is completed. Adjusting the sensor and then relocating the module requires readjustment.

The system must be disarmed. Doors and other protected entries must be closed, and the ignition Off.

## To enter Shock Adjustment Mode:

**Note:** Door locks must be learned prior to entering shock sensor adjustment mode.

Start with the system disarmed, and sit in the driver's seat. Make sure you have the OEM remote and the ignition key.

1. Turn the ignition key switch on, then off, three times in three seconds: On, off, on, off, on, off.
2. The siren/horn sounds three short chirps or honks. The Status LED will blink to indicate the current setting.
3. The adjustment mode lasts for 20 seconds. If no adjustments are made, the system exits the adjustment mode 20 seconds later. To extend the time, press the Valet Switch (see note below).
4. To increase sensitivity, press the Unlock button on the OEM remote. To decrease sensitivity, press the Lock button.

When the sensitivity increases, two quick, short chirps/honks are heard. Decreased sensitivity is indicated by one quick chirp.

If maximum or minimum settings are reached, a long chirp/honk is added.

You can test the adjustment setting by striking the outside of the vehicle with varied force levels to trigger the system. The siren chirps to confirm that the system will trigger at that setting.

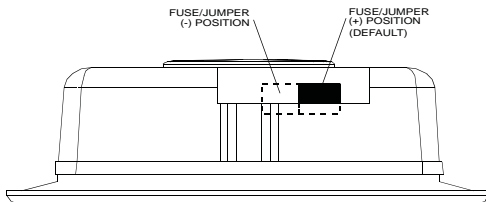
5. To exit the adjustment mode, turn on the key. Four quick, short beeps are heard. Then the Status LED will indicate the sensitivity level.

After impact sensor learn routine has been exited, the LED will confirm the current impact sensor setting.

**Important:** Horn honks apply only if the horn wire is connected.

# Internal polarity jumper

A 10A fuse is used as both a fuse and a polarity jumper. This jumper determines the light flash output polarity. In the (+) position (default), the on-board relay is enabled and the unit will output (+)12V on the WHITE wire, H1/2. In the (-) position, the on-board relay is enabled for (-) output on the WHITE wire, H1/2. To access the jumper, remove the sliding door from on top of the control module, as shown below.



## Zones

Zone	Trigger Type	Input Description
1	Instant trigger	Hood and/or trunk pin switches.
2	Multiplexed input	Heavy impact from on-board Doubleguard® shock sensor.
3	Two-stage, progresses from warning to full alarm	Door switch circuit.
4	Multiplexed	Optional sensor, Inputs shorter than 0.8 seconds will trigger Warn Away® response, while inputs longer than 0.8 seconds will instantly trigger full alarm.
5	Two-stage (similar to zone 3)	Ignition input.

**Note:** The Warn Away® response does not report on the LED.

## Long term event history

The control module will store the last 2 triggers in memory that are not erased when the ignition is turned on. This can be helpful for trouble shooting false alarm reports. To access the event history use the following procedure.

1. With the ignition switch in the off position press and hold the Valet switch.
2. While holding the Valet switch turn the ignition On.
3. Release the Valet switch.
4. Within 5-seconds, press and release the Valet switch.

The LED will flash in groups indicating the last two zones triggered. For example, if zone 2 and 3 were the last two zones to be triggered, the LED will flash two times followed by a pause and then flash three times followed by a pause.

**Note:** The Warn Away® response does not report on the LED.

The Long Term Event History will exit if the ignition is turned off or there is no activity for 60-seconds.

## Rapid resume logic

The current state of the alarm will be stored in non-volatile memory. If power is lost and then reconnected, the system will recall the stored state from memory (arm, disarm, and Valet mode).

# Feature programming

The feature programming routine is used to access and change any of the feature settings in the two menus below. The feature settings can be accessed and changed by using one of the following:

- The Valet switch to enter the feature programming routine.
- Use of the Directed Electronics Bitwriter® is recommended. Expanded programming options are only available when using the Directed Electronics Bitwriter®.

**Note:** If Feature Programming Lockout is set to ON, all features will be locked and can **ONLY** be accessed by using a Bitwriter®.

## To enter feature programming routine

1. Open a door.
2. Turn the ignition on and then off.
3. Close the door.
4. Within 5-seconds, press and HOLD the Valet switch. After 3-seconds the siren/horn will sound once to indicate entry into feature menu 1. To select the second features menu, continue to hold the Valet switch until the siren/horn sounds twice. Once the desired menu is selected, release the Valet switch.

5. Within 5-seconds, press and release the Valet switch the number of times corresponding to the desired feature listed below. Then press the Valet switch one more time and **hold**. The siren/horn will sound the number of times equal to the feature number selected.

6. While holding the Valet switch, assign the selected feature to a factory button.

Press Lock for 1 short siren chirp/horn honk, or press Unlock for 2 short siren chirps/horn honks.

**Important:** Horn honks apply only if the horn wire is connected.

## Once a feature is programmed

- Other features can be programmed.
- Other feature menu can be selected.
- Learn Routine can be exited.

## Accessing additional features

- Release, then press and release the Valet switch the number of times to advance from the feature just programmed to the next feature desired.
- Press and **hold** the Valet switch once more.
- The siren chirps/horn honks to confirm the feature selected.

## Accessing feature menu 2

- Release, then press and hold the Valet switch.
- After 3-seconds, the unit will advance to the next menu and the siren/horn will sound 2 times to indicate feature menu 2 has been entered.

## Exiting feature programming

You can do ONE of the following:

- Turn the ignition On.
- No activity for 15-seconds.
- Press and release the Valet switch too many times.

**Important:** Horn honks apply only if the horn wire is connected.

## Bitwriter® ONLY features

Due to memory limitations for this system, the following features can only be programmed using Directed's Bitwriter® programmer. Factory default settings are shown in **bold** (left column).

<b>B-1</b>	<b>Shock Sensor Adjustment - programmable 0-16</b>	
<b>B-2</b>	<b>Siren duration - 0 to 180 seconds</b>	
<b>B-3</b>	<b>Channel 3* Validity</b>	Latched/Latched reset w/ign/latch 30 second timed/2nd unlock/ delayed acc.
<b>B-4</b>	<b>Forced passive arming ON</b>	Forced passive arming OFF
<b>B-5</b>	<b>NPC ON</b>	NPC OFF
<b>B-6</b>	<b>Panic with ignition OFF</b>	Panic with ignition ON
<b>B-7</b>	<b>Dealer security features OFF</b>	Dealer security features ON
<b>B-8</b>	<b>Transmitter programming UNLOCKED</b>	Transmitter programming LOCKED
<b>B-9</b>	<b>Feature programming UNLOCKED</b>	Feature programming LOCKED

\*Feature only available if using optional antenna and non-OEM remote.

## Feature menu 1

Factory default settings are shown in **bold**.

Feature Step	Lock Button (one chirp)	Unlock Button (two chirps)
1	Active arming	Passive arming
2	<b>Chirps ON</b>	Chirps OFF
3	<b>Door Trigger Error Chirp ON</b>	Door Trigger Error Chirp OFF
4	<b>Ignition-Controlled Domelight ON</b>	Ignition-Controlled Domelight OFF
5	Panic Enabled (OEM upgrade)	<b>Auxiliary Output Enabled (OEM upgrade)</b>
6	<b>Auxiliary Output</b>	Delayed Accessory Output
7	<b>Delayed Door Trigger</b>	Instant Door Trigger
8	<b>Sensor shunt zones 1, 2 &amp; 4</b>	All zones
9	<b>Siren Duration–30 seconds</b>	Siren Duration–60 seconds
10	<b>Valet switch input: 1-pulse</b>	Valet switch input: 2-5 pulses
11	<b>Horn pulse honk duration 0.020 seconds (does not affect full trigger pulse duration)</b>	0.030, 0.040, 0.050 seconds

Feature steps 5 and 6 are related. Only if Auxiliary Output Enabled is selected in step 5 can either Auxiliary Output or Delayed Accessory Output be selected in step 6. Examples of this are where Auxiliary Output is used to provide a momentary 800mSec pulse on the RED/WHITE wire of the main harness. It may be used for opening the trunk. (continued on next page.)

The delayed accessory output allows selected vehicle accessories to remain on (such as radio) when the ignition is turned off. This output is active for 1 hour until a door is opened and closed - or the system is armed using the factory remote transmitter.

## Feature menu 2

Factory default settings are shown in **bold**.

Feature Step	Lock Button (one chirp)	Unlock Button (two chirps)
1	<b>Ignition-Controlled Locking ON</b>	Ignition-Controlled Locking OFF
2	<b>Ignition-Controlled UnLocking ON</b>	Ignition-Controlled Unlocking OFF
3	<b>Active Locking</b>	Passive Locking
4	<b>Door Lock Pulse Duration–0.8 sec.</b>	Door Lock Pulse Duration–3.5 sec.
5	<b>Single Unlock Pulse</b>	Double Unlock Pulse
6*	<b>Channel 3: Validity</b>	Channel 3: Second Unlock
7	<b>Code Hopping ON*</b>	Code Hopping OFF

\*Feature only available if using optional antenna and non-OEM remote.

# Troubleshooting

## Starter kill does not work:

- Is the correct starter wire being interrupted? If the car starts when the starter kill relay is completely disconnected, the wrong starter wire has been cut and interrupted.
- Is the yellow wire connected to “true” ignition? Make sure this wire is connected to a wire that has power in the run and start positions.
- The starter kill goes active 1 minute after arming the alarm. Make sure you wait that time period before attempting to test.

## The Valet switch does not work.

- Is it plugged into the correct socket? See the Valet Switch section of this guide.
- Is the H1/9 YELLOW wire properly connected? See Primary Harness (H1) Wire Connection Guide section of this guide.
- If the mounting of the switch is a tight fit it can cause the switch not to work properly. Make sure the hole size is drilled with a 5/16 drill bit.

## Status LED does not work.

- Is the LED plugged into the small white port on the side of the control unit? See LED and Valet Switch section of this guide.

## Passive or Ignition controlled door locks operate backwards.

- This unit has easily-reversed lock/unlock outputs. Recheck Door lock harness outputs (H3) section, to see if you have reversed these.

## The siren chirps/horn honks when the unit enters panic mode, but the confirmation chirps/honks do not work when locking and unlocking.

- Are the confirmation chirps/honks turned on in programming? See Feature Programming section.
- Is the unit in Valet mode.
- Is the horn pulse duration long enough? Some cars require a longer pulse on the horn wire for it to honk. (see features programming menu 1-11).

## I can get into programming and change the feature settings, but when I use the remote the settings seem to change.

- Are you using a binary, master dealer remote? Remember, you can program the settings using a master dealer remote. However, the unit will follow the dealer default settings when using a binary remote to operate the system.

## Door Lock Learn Routine does not learn door locks.

- Check connections to be sure everything is properly connected. Refer to the *Keyless Entry Systems - Two Types* section of this guide.
- Check the *Door Lock Learn Routine* section of this guide to ensure the correct procedure is being used.

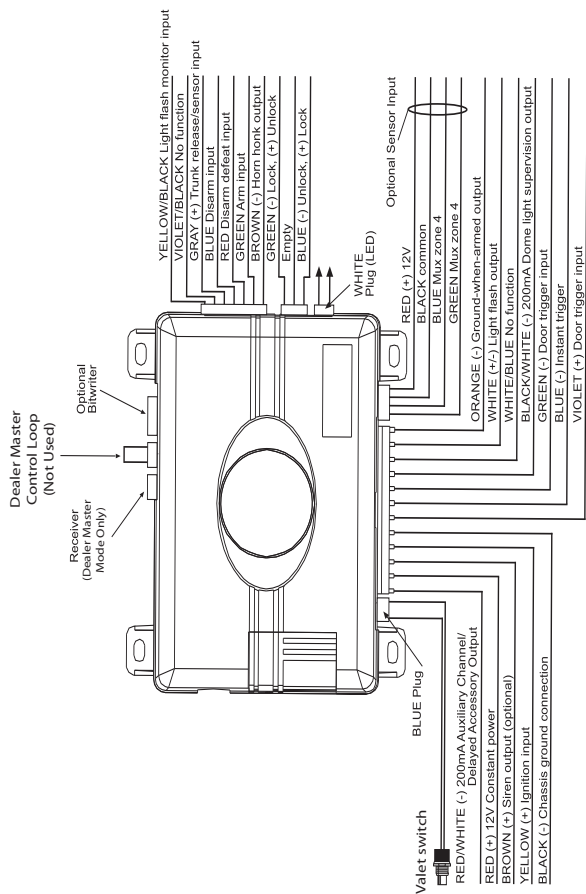
**Door Lock Learn Routine does not work, the unit enters the learn routine then chirps/honks and exits.**

- Some cars do not lock the doors when the door is open. For these vehicles, to program the unit correctly the door needs to be closed.

**Unit goes into Programming every time the ignition is turned off.**

- The Valet switch is probably stuck in the down position. If the hole for the switch is too tight, the travel of the switch can be impaired and the switch may stick in the down position. To allow the button to travel freely, the mounting hole must not be too tight.

# Wiring quick reference guide





The company behind this system is Directed Electronics

Since its inception, Directed Electronics has had one purpose, to provide consumers with the finest vehicle security and car stereo products and accessories available. The recipient of nearly 100 patents and Innovations Awards in the field of advanced electronic technology.

Directed is ISO 9001 registered.

Quality Directed Electronics products are sold and serviced throughout North America and around the world.

Call (800) 274-0200 for more information about our products and services.

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